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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,797	06/01/2001	Stephen Paul Morgan	ARC920000133US1	4139

7590

12/23/2004

John L. Rogitz
Rogitz & Associates
Suite 3120
750 B Street
San Diego, CA 92101

EXAMINER

DINH, MINH

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,797

Applicant(s)

MORGAN ET AL.

Examiner

Minh Dinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-18 have been examined.

Claim Objections

2. Claim 1 is objected to because of the following informalities: "the CA" at the end of the claim should be in plural. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 recites the limitation "wherein each signature" in line 1. There is insufficient antecedent basis for this limitation in the claim. For examination purpose, claim 6 is treated as being dependent on claim 5.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harkins et al, "RFC 2409 – The Internet Key Exchange (IKE)", in view of Asay et al (5903,882).

a. Regarding claims 1-3 and 13-15, Harkins discloses a computer authentication protocol comprising sending a certificate payload from a sending computer to a receiving computer, the certificate payload including the sender's certificate (Section 3.2, Notation; Section 5.1, IKE Phase 1 Authentication With Signature).

Harkins does not disclose sending two certificates each being generated by a respective certificate authority (CA), the certificate authorities being independent of each other such that no trust relationship exists between the CAs. Asay discloses sending two certificates, the certificate of the sender together with the certificate of the host device, each certificate being generated by a respective certificate authority (CA), the certificate authorities being independent of each other such that no trust relationship exists between the CAs (col. 32, lines 9-17; col. 37, lines 25-51; figure 6, elements 206, 208; and figure 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Harkins protocol to send two certificates, the certificate of the sender together with the certificate of the host device, each certificate being generated by a respective certificate authority (CA), the certificate authorities being independent of each other such that no trust relationship exists between the CAs, as taught by Asay. The host device could be authenticated using the device's certificate (col. 36, line 64 – col. 37, line 11).

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b. Regarding claims 4 and 16, Harkins discloses sending at least one identification (ID) payload between the computers, the ID payload including the sender's ID (Section 5.1, IKE Phase 1 Authentication With Signature). Harkins does not disclose the ID payload being generated by combining the IDs of at least two entities; however, this feature is obvious by the combination of Harkins and Asay discussed above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Harkins protocol such that the ID payload is generated by combining the IDs of two entities. Please refer to motivation recited for using two certificates for authentication as taught by Asay in claim 1.

c. Regarding claims 5 and 17, Harkins discloses sending at least one signature payload between the computers, the signature payload including the sender's signature (Section 5.1, IKE Phase 1 Authentication With Signature). Harkins does not disclose the signature payload being generated by concatenating the signatures of at least two entities; however, this feature is obvious by the combination of Harkins and Asay discussed above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Harkins protocol such that the signature payload is generated by concatenating the signatures of two entities. Please refer to motivation recited for using two certificates for authentication as taught by Asay in claim 1.

d. Regarding claim 7, Harkins discloses a device comprising means for generating and sending an ID payload and a certificate payload from a sending computer to a receiving computer, the ID payload including the sender's ID, the

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certificate payload including the sender's certificate (Section 3.2, Notation; Section 5.1, IKE Phase 1 Authentication With Signature).

Harkins does not disclose sending a second ID and a second certificate associated with an entity different than the sender. Asay discloses sending the IDs and certificates associated with two entities, a sender and the host device (col. 32, lines 9-17; figure 6, elements 206, 208; and figure 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Harkins device to send the IDs and certificates associated with both the sender and the host device, as taught by Asay. The host device could be authenticated using the device's certificate (col. 36, line 64 – col. 37, line 11). Accordingly, the ID payload includes the two IDs.

e. Regarding claim 8, Harkins discloses means for generating one signature payload including the sender's signature (Section 5.1, IKE Phase 1 Authentication With Signature). Harkins does not disclose the signature payload being generated by concatenating the signatures of at least two entities; however, this feature is obvious by the combination of Harkins and Asay discussed above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Harkins device such that the signature payload is generated by concatenating the signatures of two entities. Please refer to motivation recited for using two certificates for authentication as taught by Asay in claim 7.

f. Regarding claim 10, Harkins discloses a device comprising means for generating and sending a signature payload and a certificate payload from a sending computer to a receiving computer, the signature payload including the sender's

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signature, the certificate payload including the sender's certificate (Section 3.2, Notation; Section 5.1, IKE Phase 1 Authentication With Signature).

Harkins does not disclose sending a second signature and a second certificate associated with an entity different than the sender. Asay discloses sending the signatures and certificates associated with two entities, a sender and the host device (col. 32, lines 9-17; figure 6, elements 206, 208; and figure 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Harkins device to send the signatures and certificates associated with both the sender and the host device, as taught by Asay. The host device could be authenticated using the device's certificate (col. 36, line 64 – col. 37, line 11). Accordingly, the signature payload is generated by concatenating the two signatures.

g. Regarding claims 6, 9, 11 and 18, Harkins further discloses that a signature is formed by applying a pseudorandom function to at least the associated ID to render a result, and then encrypting the result with a private key associated with the entity represented by the ID (Section 5, Exchange, "To authenticate either ... HASH_R directly").

h. Regarding claim 12, Harkins discloses means for generating and sending an ID payload including the sender's ID (Section 5.1, IKE Phase 1 Authentication With Signature). Harkins does not disclose the ID payload being generated by combining the IDs of two entities; however, this feature is obvious by the combination of Harkins and Asay discussed in claim 10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Harkins device such that the ID

payload is generated by combining the IDs of two entities. Please refer to motivation recited for using two certificates for authentication as taught by Asay in claim 10.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sudia, (5,659,616), discloses a method for securely using digital signatures in a commercial cryptographic system.

Yoshimoto, (6,237,023), discloses a system for controlling the authority of both a terminal and a user.

Ellison et al, "RFC 2693 – SPKI Certificates Theory".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dinh whose telephone number is 571-272-3802. The examiner can normally be reached on Mon-Fri: 10:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

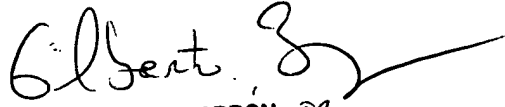
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MD

Minh Dinh
Examiner
Art Unit 2132

MD
12/17/04


GILBERTO BARRON JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100